

**ABSTRACT FOR THE 33RD COSPAR
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CASSINI/HUYGENS AND THE EXPLORATION OF TITAN

D. L. Matson (1), J.-P. Lebreton (2)

(1) Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA 91106, USA, (2) Space Science Dept. of ESA, ESTEC, P. O. Box 299, 2200 AG Noordwijk, The Netherlands

The Cassini/Huygens mission is designed to carry out an in-depth exploration of Titan and the Saturnian system. The spacecraft started its interplanetary journey on October 15, 1997, with a launch by the Titan-4 Centaur system. Upon arrival at Saturn, Cassini/Huygens will go into orbit about the planet. The Orbiter will deliver the Huygens probe to Titan in November, 2004. After deceleration in the upper atmosphere, Huygens will deploy a parachute system and its six instruments will make scientific measurements and observations as it descends to the surface. These data then will be transmitted to the Orbiter which, in turn, will relay them to the Earth. The Orbiter will then commence a four year long tour of the Saturnian system. With its complement of 12 instruments, Cassini is capable of making a wide range of in situ and remote sensing observations. There will be repeated close flybys of Titan both to make measurements and obtain observations and for gravity-assisted orbit changes which will enable Cassini to visit other satellites, various parts of the magnetosphere, and obtain occultations of the rings and atmospheres of Saturn and Titan. During the span of the mission, Cassini will also record temporal changes in many of the properties that it can observe. The Cassini mission is a joint undertaking by NASA and ESA. The JPL portion of this work has been carried out under contract with NASA.